

§Appl. No. 09/965,807
Amdt. dated January 26, 2006
Reply to Office Action of, October 7, 2005

Listing of Claims:

Please **amend** the claims as follows:

Claim 22 (Currently Amended) An isolated human aspartoacylase polypeptide having either an altered ability to hydrolyze N-acetyl-aspartic acid to aspartate and acetate, as compared with a wild-type human aspartoacylase, or incapable of hydrolyzing N-acetyl-aspartic acid to aspartate and acetate, and comprising the amino acid sequence SEQ ID NO: 2 of wild-type human aspartoacylase, except that said sequence has one or more of the following amino acid substitutions:

E285 > A,

Y231 > X, and/or

A305 > E,

whereby E is glutamate, A is alanine, Y is tyrosine, and X is any naturally-occurring amino acid.

Claim 23 (Cancelled)

Claim 24 (Previously Presented) A human aspartoacylase of claim 22, wherein the glutamic acid at amino acid position 285 is substituted by alanine.

Claim 25 (Cancelled)

Claim 26 (Cancelled)

Claim 27 (Cancelled)

§Appl. No. 09/965,807
Amdt. dated January 26, 2006
Reply to Office Action of, October 7, 2005

Claim 28	(Cancelled)
Claim 29	(Cancelled)
Claim 30	(Cancelled)
Claim 31	(Cancelled)
Claim 32	(Cancelled)
Claim 33	(Cancelled)
Claim 34	(Cancelled)
Claim 35	(Cancelled)
Claim 36	(Cancelled)
Claim 37	(Cancelled)
Claim 38	(Cancelled)
Claim 39	(Cancelled)
Claim 40	(Cancelled)
Claim 41	(Cancelled)
Claim 42	(Cancelled)
Claim 43	(Cancelled)
Claim 44	(Cancelled)
Claim 45	(Cancelled)
Claim 46	(Cancelled)
Claim 47	(Cancelled)
Claim 48	(Cancelled)
Claim 49	(Cancelled)
Claim 50	(Cancelled)
Claim 51	(Cancelled)
Claim 52	(Cancelled)
Claim 53	(Cancelled)

§Appl. No. 09/965,807
Amdt. dated January 26, 2006
Reply to Office Action of, October 7, 2005

Claim 54 (Cancelled)
Claim 55 (Cancelled)
Claim 56 (Cancelled)
Claim 57 (Cancelled)
Claim 58 (Cancelled)
Claim 59 (Cancelled)
Claim 60 (Cancelled)
Claim 61 (Cancelled)
Claim 62 (Cancelled)
Claim 63 (Cancelled)
Claim 64 (Cancelled)
Claim 65 (Cancelled)
Claim 66 (Cancelled)

Claim 67 (Previously Presented) A recombinant and purified human aspartoacylase capable of hydrolyzing N-acetyl aspartic acid to aspartate and acetate, comprising an amino acid sequence which has a sequence identity of at least 95% to the sequence of SEQ ID NO: 2.

Claim 68 (Previously Presented) A fragment of a recombinant human aspartoacylase of claim 67, comprising an aspartoacylase epitope which is immunologically-effective to elicit antibodies that selectively bind to said human aspartoacylase and which is capable of hydrolyzing N-acetyl aspartic acid to aspartate and acetate.

§Appl. No. 09/965,807
Amdt. dated January 26, 2006
Reply to Office Action of, October 7, 2005

Claim 69 (Previously Presented) A pharmaceutical composition, comprising an isolated wild-type human aspartoacylase comprising the amino acid sequence SEQ ID NO: 2, and a pharmaceutically acceptable carrier.

Claim 70 (Cancelled)

Claim 71 (Previously Presented) An isolated and purified wild-type human aspartoacylase comprising the amino acid sequence SEQ ID NO: 2, which is free of other human proteins.

Claim 72 (Previously Presented) A preparation which consists essentially of a wild-type human aspartoacylase comprising the amino acid sequence SEQ ID NO: 2.

Claim 73 (Cancelled)

Claim 74 (Previously Presented) A human aspartoacylase comprising the amino acid sequence SEQ ID NO: 2, or comprising an amino acid sequence which has a sequence identity of at least 95% to the sequence of SEQ ID NO: 2 produced by,

(a) culturing a host cell transformed with a vector comprising a DNA which encodes for said human aspartoacylase in a cell culture medium under conditions whereby the

§Appl. No. 09/965,807
Amdt. dated January 26, 2006
Reply to Office Action of, October 7, 2005

aspartoacylase is expressed, and

(b) isolating the thus-produced aspartoacylase.

Claim 75 (Previously Presented) A human aspartoacylase comprising the amino acid sequence SEQ ID NO: 2, or comprising an amino acid sequence which has a sequence identity of at least 95% to the sequence of SEQ ID NO: 2, produced in a bacterium, a fungus, or a non-human mammalian cell.

Claim 76 (Cancelled)

Claim 77 (Cancelled)

Claim 78 (Cancelled)

Claim 79 (Cancelled)

Claim 80 (Cancelled)

Claim 81 (Cancelled)

Claim 82 (Cancelled)

Claim 83 (Cancelled)

Claim 84 (Cancelled)

Claim 85 (Cancelled)

Claim 86 (Cancelled)

Claim 87 (Cancelled)

§Appl. No. 09/965,807
Amdt. dated January 26, 2006
Reply to Office Action of, October 7, 2005

Claim 88 (Cancelled)

Claim 89 (Previously Presented) An isolated human aspartoacylase capable of hydrolyzing N-acetyl aspartic acid to aspartate and acetate, comprising the amino acid sequence SEQ ID NO: 2, or comprising an amino acid sequence which has a sequence identity of at least 95% to the sequence of SEQ ID NO: 2, which is produced by expressing a DNA coding for said aspartoacylase in a non-human mammalian host cell.

Claim 90 (Previously Presented) An isolated human aspartoacylase of claim 89, comprising the amino acid sequence SEQ ID NO: 2.

Claim 91 (Cancelled)

Claim 92 (Previously presented) A recombinant human aspartoacylase having either an altered ability to hydrolyze N-acetyl-aspartic acid to aspartate and acetate, as compared with a wild-type human aspartoacylase, or incapable of hydrolyzing N-acetyl-aspartic acid to aspartate and acetate, and comprising an amino acid sequence which has a sequence identity of at least 95% to the sequence of SEQ ID NO: 2.

Claim 93 (Previously presented) A fragment of a human aspartoacylase comprising SEQ ID NO: 2, which is immunologically-effective to elicit antibodies that selectively bind to said human aspartoacylase.

Claim 94 (Previously presented) A fragment of claim 93, wherein said fragment comprises at least 26 amino acids.